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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,743	11/26/2003	Dean Weldon Boyd	82001-0397	3948

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EXAMINER
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ROSEN, NICHOLAS D

ART UNIT	PAPER NUMBER
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3625

DATE MAILED: 09/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/721,743	BOYD ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Nicholas D. Rosen	3625	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 September 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner. *& approved by Draftsperson*
- 10) ☒ The drawing(s) filed on 26 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/15/04 and 9/14/05</u> .                                    | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

Claims 1-14 have been examined.

#### ***Specification***

The disclosure is objected to because of the following informalities: The Brief Description of the Drawings should more clearly correspond to the drawings, listing them. The Brief Description states, "FIGS. 2-13 represent steps in the operation of various components . . ." At a minimum, the figures should be listed, e.g., "FIGS. 2, 3, 4, 5, 6A, 6B, 7, 8, 9, 10, 11, 12, and 13 represent steps in the operation of various components . . ."

There are inconsistencies in the use of part numbers and terms within the specification, and between the specification and the drawings. In paragraph [0019], on page 5, reference is made to "an incentive translation module ('ITM') 300, a customer segmentation module ('CUSM') 400," but in both Figure 1A and elsewhere in the specification (pages 9 and 10; paragraphs [0030] through [0032]), the customer segmentation module is 300, and the incentive translation module is 400. Furthermore, on page 10, after paragraph [0031], there is a mistaken reference to "Incentive *Typing* Module 400."

Appropriate correction is required.

Art Unit: 3625

### ***Claim Objections***

Claims 5 and 12 are objected to because of the following informalities: In the second and third lines of each of claims 5 and 12, "the product" technically lacks antecedent basis. Appropriate correction is required.

### ***Regarding the Information Disclosure Statements***

In the IDS's of both November 15, 2004 and September 14, 2005, U.S. Patent 6,094,641 should be to Ouimet et al., not Quimet et al. In the later IDS, the book by David D. Friedman should be "Price Theory: An Intermediate Text," rather than "Price an Intermediate Text Theory" (despite the cover design).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

#### **Boushy**

Claims 8, 10, 11, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Boushy et al. (U.S. Patent 6,993,494). As per claim 8, Boushy discloses a configurable pricing optimization system comprising: a price optimization means for receiving stored data and for using this stored data to suggest an optimal pricing level

Art Unit: 3625

(column 3, line 35, through column 4, line 56; column 6, line 23, through column 7, line 21; Figure 1); and a configuration means for allowing a user to modify the stored data, whereby the modification of the stored data modifies the suggested optimal pricing level (column 10, line 62, through column 11, line 2; column 17, lines 16-50).

As per claim 10, Boushy discloses that the configuration means allows the user to define market conditions to be considered by the price optimization means (column 10, line 62, through column 11, line 2; column 17, lines 16-50).

As per claim 11, Boushy discloses that the configuration means allows the user to define the relationship between two products (column 17, lines 16-50); and that the relationship is used by the price optimization means to determine changes in sales of a first product caused by changes in a price for a second product (column 17, lines 16-68).

As per claim 14, Boushy discloses that the configuration means visually displays changes in the suggested optimal pricing level (column 10, line 62, through column 11, line 2; column 17, lines 16-50; column 19, lines 31-36; note also Figures 4 and 5).

### **Delurgio**

Claims 8, 9, 12, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Delurgio et al. (U.S. Patent Application Publication 2002/0165834). As per claim 8, Delurgio discloses a configurable pricing optimization system comprising: a price optimization means for receiving stored data and for using this stored data to suggest an optimal pricing level (Abstract; paragraphs 14, 15, 16, and 80); and a configuration means for allowing a user to modify the stored data, whereby the modification of the

Art Unit: 3625

stored data modifies the suggested optimal pricing level (paragraph 80; from the description of the "additional data," it inherently follows that modification of the "additional data" would result in modification of the results, the suggested optimal pricing level).

As per claim 9, Delurgio discloses that the configuration means allows the user to define boundaries or constraints for a mathematical model used by the price optimization means (paragraphs 14, 15, 16, 64, and 80).

As per claim 12, Delurgio discloses that the price optimization means performs method steps of creating a model of a market for the product, collecting historical transaction data related to the product in the market, and analyzing the historical data and the model to determine sales volume changes from changes in the price of the product, and whereby the configuration means allows the user to define the market model (Abstract; paragraphs 14, 15, 16, 57, 64, 76, 77, 78, 80, 98, 101, and 102).

As per claim 14, Delurgio discloses that the configuration means visually displays changes in the suggested optimal pricing level (paragraphs 62, 80, 105, 106, 107, 108, 112, and 114; Figures 17, 18, 19, 20, 21, 24, and 26).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Boushy as primary reference**

Claims 9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boushy et al. (U.S. Patent 6,993,494) as applied to claim 8 above, and further in view of official notice. As per claim 9, Boushy does not expressly disclose that the configuration means allows the user to define boundaries or constraints for a mathematical model used by the price optimization means (although the disclosed feature of the user entering information about competitors' prices, etc., can be viewed as the user defining boundaries or constraints for such a mathematical model), but official notice is taken that it is well known to allow users to define boundaries or constraints for mathematical models (e.g., a differential equation will typically provide meaningful answers only when constraints and boundary conditions are provided). Hence, it would have been obvious to one of ordinary skill in the art of electronic commerce at the time of applicant's invention for the configuration means to allow the user to define boundaries or constraints for a mathematical model used by the price optimization means, for the

Art Unit: 3625

obvious advantage of making it possible to provide answers reflecting applicable conditions.

As per claim 13, Boushy does not expressly disclose that the configuration means visually displays possible values for a data variable to be modified, but official notice is taken that it is well known for computers to display possible values for data variables to be modified, enabling users to choose either the value that accurately reflects their case, or a possible value for which results would be of interest. Hence, it would have been obvious to one of ordinary skill in the art of electronic commerce at the time of applicant's invention to display possible values for a data variable to be modified, for the obvious advantage of enabling the user to readily select an appropriate value.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boushy et al. (U.S. Patent 6,993,494) as applied to claim 10 above. Boushy discloses that the configuration means allows the user to define the relationship between two products (column 17, lines 16-50). Boushy does not expressly disclose that the relationship is used by the price optimization means to determine changes in sales of a first product caused by changes in a price for a second product, but this is implied, in that changes in a price for a second product are used to determine how much the price of the first product must be reduced, lest sales of the first product be lost to competition.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boushy et al. (U.S. Patent 6,993,494) as applied to claim 8 above. Boushy discloses that the price optimization means performs method steps of creating a model of a market for the



Art Unit: 3625

product, collecting historical transaction data related to the product in the market (column 3, line 35, through column 4, line 56; column 6, line 23, through column 7, line 21; Figure 1). Boushy does not expressly disclose analyzing the historical data and the model to determine sales volume changes from changes in the price of the product, but this is implied, in that prices are accordingly adjusted to increase the volume of sales. Boushy discloses that the configuration means allows the user to define the market model (column 18, lines 1-22).

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boushy et al. (U.S. Patent 6,993,494) in view of official notice. Claims 1-7 are closely parallel to claims 8-14, and rejected on essentially the same grounds. Boushy does not expressly disclose that the computer applications of his patent tangibly embody programs of instructions to carry out the operations of claim 1 and its dependents; but first, applications tangibly embodying instructions are taught by claims 36 and 37; secondly, some form of tangible embodiment may be inherent, although this could lead to philosophical questions regarding the meaning of "tangible"; and third, official notice is taken that it is well known for programs to tangibly embodied. Hence, it would have been obvious to one of ordinary skill in the art of electronic commerce at the time of applicant's invention for the applications to tangibly embody programs of instructions executable by a machine, for the obvious advantage of readily enabling the computer system disclosed by Boushy to carry out its disclosed functions.

**Delurgio as primary reference**

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Delurgio as applied to claim 8 above. As per claim 10, Delurgio does not expressly disclose that the configuration means allows the user to define market conditions to be considered by the price optimization means, although the information which the user does define for consideration by the price optimization means (paragraph 80) can arguably be viewed as market conditions. Delurgio does disclose allowing the user to define various information (e.g., claim 80), and discloses taking market conditions into consideration (e.g., paragraphs 64, 65, 66, 67, and 68); hence, it would have been obvious to one of ordinary skill in the art of electronic commerce at the time of applicant's invention for the configuration means to allow the user to define market conditions to be considered by the price optimization means, for the obvious advantage of basing the calculations on market conditions of which the user had knowledge, or potential market conditions which the user thought instructive to model.

Delurgio discloses that the relationship between two products is used by the price optimization engine to determine changes in sales of a first product caused by changes in a price for a second product (paragraphs 56 and 65). Delurgio does not expressly disclose allowing the user to define the relationship between the two products, but Delurgio does disclose allowing the user to define various information (e.g., claim 80); hence, it would have been obvious to one of ordinary skill in the art of electronic commerce at the time of applicant's invention for the configuration means to allow the user to define the relation between the two products, for the obvious advantage of basing the calculations on product relationships of which the user had

knowledge, or potential product relationships which the user thought instructive to model.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Delurgio as applied to claim 8 above, and further in view of official notice. Delurgio does not expressly disclose that the configuration means visually displays possible values for a data variable to be modified, but official notice is taken that it is well known for computers to display possible values for data variables to be modified, enabling users to choose either the value that accurately reflects their case, or a possible value for which results would be of interest. Hence, it would have been obvious to one of ordinary skill in the art of electronic commerce at the time of applicant's invention to display possible values for a data variable to be modified, for the obvious advantage of enabling the user to readily select an appropriate value.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Delurgio et al. (U.S. Patent Application Publication 2002/0165834) in view of official notice. Claims 1-7 are closely parallel to claims 8-14, and rejected on essentially the same grounds. Delurgio does not expressly disclose that the computer applications of his patent application tangibly embody programs of instructions to carry out the operations of claim 1 and its dependents; but first, some form of tangible embodiment may be inherent, although this could lead to philosophical questions regarding the meaning of "tangible"; and secondly, official notice is taken that it is well known for programs to tangibly embodied. Hence, it would have been obvious to one of ordinary skill in the art of electronic commerce at the time of applicant's invention for the

applications to tangibly embody programs of instructions executable by a machine, for the obvious advantage of readily enabling the computer system disclosed by Delurgio to carry out its disclosed functions.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Blume et al. (U.S. Patent 6,839,682) disclose predictive modeling of consumer financial behavior using supervised segmentation and nearest neighbor matching. Boyd et al. (U.S. Patent 7,072,848) discloses a promotion pricing system and method (parent case of the instant application, by continuation-in-part).

Phillips et al. (U.S. Patent Application Publication 2002/0116348) disclose a dynamic pricing system (this is believed to be not only pertinent, but a potential basis for other rejections under 35 U.S.C. 102).

Nagatomo (Japanese Published Patent Application 2002-74071A) discloses an optimum market price determining system, by auction and record medium.

The anonymous article, "Price Sensitivity Model Will Find Optimum Selling Price for Product" (Abstract only), discloses a program for effective pricing strategy.

Korhonen et al. ("A Multiple Criteria Model for Pricing Alcoholic Beverages," Abstract only) disclose a computer-implemented model for determining optimal prices. Jones ("Untouched by Human Hand," Abstract only) discloses an expert system for creating optimum and advertising levels. Hardgrove ("Focusing on the Top-Tier Consumer") discloses modeling analyses to identify optimum retail prices. The anonymous article,

Art Unit: 3625

"Web Community for 'Most Important Software' Debuts at E-Optimization.Com,"  
discloses yield management for helping airlines and hotels determine optimal  
price/occupancy.

Any inquiry concerning this communication or earlier communications from the  
examiner should be directed to Nicholas D. Rosen whose telephone number is 571-  
272-6762. The examiner can normally be reached on 8:30 AM - 5:00 PM, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's  
supervisor, Jeffrey A. Smith can be reached on 571-272-6763. The fax phone number  
for the organization where this application or proceeding is assigned is 571-273-8300.  
Non-official/draft communications can be faxed to the examiner at 571-272-6762.

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*Nicholas D. Rosen*

**NICHOLAS D. ROSEN  
PRIMARY EXAMINER**

September 18, 2006